This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (withdrawn) A method for transmyocardial coronary revascularization, said method comprising the step of:

a) creating a transmyocardial bloodflow passageway between a chamber of the heart and a coronary vein.

Claim 2. (withdrawn) The method of Claim 1 .wherein said passageway is formed such that blood will flow from the chamber of the heart, through the fransmyocardial bloodflow passageway, and through the lumen of the coronary vein, in a retrograde direction, so as to perfuse said region of the myocardium.

Claim 3. (withdrawn) The method of Claim 1 wherein said coronary vein is situated next to a coronary artery, and wherein said method further comprises the step of:

b) forming a fistulous connection between said coronary vein and said adjacent coronary artery, at a location which is downstream of said transmyocardial bloodflow passageway, such that blood may flow from the chamber of the heart, through said transmyocardial bloodflow passageway, through said vein, through said fistulous connection, and into the adjacent coronary artery so as to provide enhanced bloodflow through said coronary artery.

Claim 4. (withdrawn) The method of Claim "3" 'wherein said fistulous connection is a secondary bloodflow passageway which extends from said coronary vein to said coronary artery.

Claim 5. (withdrawn) The method of Claim 1 , further comprising the additional step of:

b) blocking the lumen of the coronary vein at a location which is upstream of said transmyocardial bloodflow passageway.

Claim 6. (withdrawn) The method of Claim 3 wherein said method further comprises the steps of:

blocking the lumen of the coronary vein at a location downstream of said fistulous connection.

Claim 7. (withdrawn) The method of Claim 1 further comprising the step of:

b) placing an intraluminal valving apparatus within the lumen of the coronary vein, said intraluminal bloodflow passageway, said tissue valve will move to its closed position.

Claim 8. (withdrawn) The method of Claim 1 further comprising the step of:

connecting an elastic closure member to cardiac tissue on either side of said transmyocardial bloodflow passageway, said elastic closure member being alternately transitionable between:

i) a stretched configuration whereby said transmyocardial bloodflow passageway is opened to permit blood to flow from said fransmyocardial bloodflow passageway into said coronary vein; and

ii) a retracted configuration whereby said fransmyocardial bloodflow passageway is substantially blocked so as to prevent blood from backflowing from said coronary vein into said transmyocardial bloodflow passageway.

Claim 9. (withdrawn) The method of Claim 16 wherein said elastic closure member comprises a suture which is formed of elastic material, said suture being threaded through said myocardial tissue on opposite sides of said fransmyocardial bloodflow passageway.

Claim 10. (withdrawn) The method of Claim 1 further comprising the step of:

b) placing an intracardiac valving apparatus within the chamber of the heart, adjacent one end of said transmyocardial bloodflow passageway, said intracardiac valving apparatus being alternately deployable in:

i) an open position whereby bloodflow is permitted to pass through the transmyocardial bloodflow passageway in a first direction; and,

ii) a closed position whereby blood is prevented from backflowing through the transmyocardial bloodflow passageway, in a second direction, said second direction being opposite said-first direction.

Claim 11. (withdrawn) The method of Claim 1 further comprising the step of:

c) forming an endogenous tissue valve which is alternately moveable between:

i) an open position whereby bloodflow is permitted to pass from said transmyocardial bloodflow passageway and through the lumen of said coronary vein, in a perfusion direction; and,

ii) a closed position whereby said tissue valve will prevent blood from flowing from the coronary vein into said transmyocardial bloodflow passageway, in a backflow direction.

Claim 12. (withdrawn) The method of Claim 1 further comprising the step of:

c) forming an endogenous tissue valve which is alternately moveable between:

i) an open position whereby bloodflow is permitted to pass from said transmyocardial bloodflow passageway and through the lumen of said coronary vein, in a perfusion direction; and,

ii) a closed position whereby said tissue valve will prevent blood from

flowing from the coronary vein into said transmyocardial bloodflow passageway, in a backflow direction.

Claim 13. (withdrawn) The method of Claim 12 wherein said tissue valve is formed at the junction of the transmyocardial bloodflow passageway and the coronary vein

Claim14. (withdrawn) The method of Claim 13 wherein the tissue valve comprises at least one segment of the coronary vein in combination with at least one underlying segment of myocardial tissue.

Claim15. (withdrawn) The method of Claim 14 wherein at least one segment of coronary vein and the at least one segment of underlying tapered segment of myocardial tissue which form said tissue valve are sized and configured such that, when systolic blood pressure is created within said transmyocardial bloodflow passageway, said tissue valve will move to its open position, and thereafter when diasfcolic blood pressure is present in said transmyocardial bloodflow passageway, said tissue valve will move to its closed position.

Claim16. (withdrawn) The method of Claim 1 further comprising the step of:

connecting an elastic closure member to cardiac tissue on either side of said transmyocardial bloodflow passageway, said elastic closure member being alternately transitionable between:

i) a stretched configuration whereby said transmyocardial bloodflow passageway is opened to permit blood to flow from said fransmyocardial bloodflow passageway into said coronary vein; and

ii) a retracted configuration whereby said fransmyocardial bloodflow passageway is substantially blocked so as to prevent blood from backflowing from said coronary vein into said transmyocardial bloodflow passageway.

Claim 17. (withdrawn) The method of Claim 16 wherein said elastic closure member comprises a suture which is formed of elastic material, said suture being threaded through said myocardial tissue on opposite sides of said fransmyocardial bloodflow passageway.

Claim18. (withdrawn) The method of Claim 1 further comprising the step of:

b) placing an intracardiac valving apparatus within the chamber of the heart, adjacent one end of said transmyocardial bloodflow passageway, said intracardiac valving apparatus being alternately deployable in:

i) an open position whereby bloodflow is permitted to pass through the transmyocardial bloodflow passageway in a first direction; and,

ii) a closed position whereby blood is prevented from backflowing through the transmyocardial bloodflow passageway, in a second direction, said second direction being opposite said-first direction.

Claim 19. (withdrawn) The method of Claim 18 wherein said transmyocardial bloodflow passageway is intended to provide a flow of blood from the chamber of the heart to the coronary vein, and wherein said first direction is the direction extending from the chamber of the heart to the coronary vein, and said second direction is the direction extending from the coronary vein to the chamber of the heart.

Claim 20. (withdrawn) The method in Claim 18 wherein said transmyocardial bloodflow passageway is intended to drain blood from the coronary vein into the chamber of the heart, and wherein said first direction is the direction extending from the coronary vein to the chamber of the heart, and said second direction is the direction extending from the chamber of the heart to the coronary vein.

Claim 21. (withdrawn) The method of Claim 18 wherein the intracardiac valving apparatus provided in step b is attached to the wall of the chamber of the heart, and is positioned over the opening formed in the chamber of the heart by said fransmyocardial bloodflow passageway.

Claim 22. (withdrawn) The method of Claim 21 wherein said intracardiac valving apparatus is sutured to the wall of the chamber of the heart.

Claim 23. (withdrawn) The method of Claim 21 wherein said intracardiac valving apparatus is adhered to the wall of the chamber of the heart.

Claim 24. (withdrawn) The method of Claim 1 further comprising the step of:

b) placing a protrusive stent within said transmyocardial passageway, such that said protrusive stent extends into said coronary vein.

Claim 25. (withdrawn) The method .of Claim 24 wherein said protrusive stent is uncovered.

Claim 26. (withdrawn) The method of Claim 24 wherein said protrusive stent is at least partially covered.

Claim 27. (withdrawn) The method of Claim 24 wherein said protrusive stent incorporates at least one valve to intermittently block blood flow, in at least one direction, through said transmyocardial passageway.

Claim 28. (withdrawn) The method of Claim 27 wherein said valve is operative to permit blood to flow from said chamber of the heart through said transmyocardial passageway, and into said coronary vein, but will prevent blood from backflowing from said coronary vein into said transmyocardial passageway.

Claim 29. (withdrawn) A method for fransmyocardial direct coronary revascularization, said method comprising the steps of:

a) forming a transmyocardial bloodflow passageway from a chamber of the heart to a coronary blood vessel;

b) permitting blood to flow from the chamber of the heart, through said fransmyocardial bloodflow passageway; and

c) into the coronary blood vessel, while said transmyocardial bloodflow passageway remains devoid of any stent positioned therewithin

Claim 30. (withdrawn) The method of Claim 29 wherein said blood vessel is selected from the group consisting of:

i) an endogenous coronary artery;

ii) an endogenous coronary vein;

iii) a man-made passageway which has been formed in the heart ; and 'which connects -to an endogenous coronary vein;

iv) a man-made passageway which has been formed in the heart and which connects to an endogenous coronary artery; and

v) a man-made passageway which extends between an endogenous coronary artery and an endogenous coronary vein.

Claim 31. (withdrawn) The method of Claim 29 wherein said coronary blood vessel is an endogenous coronary vein which is situated next to a coronary artery, and wherein said method, further comprises the step of:

d) forming a second bloodflow passageway between said coronary vein and the adjacent coronary artery, at a location which is downstream of said transmyocardial bloodflow passageway.

Claim 32. (withdrawn) The method of Claim 31 wherein said second bloodflow passageway is a fistulous tract which extends between said coronary vein and said coronary artery.

Claim 33. (withdrawn) The method of Claim 29 wherein it is intended for blood to flow in a first flow direction through said coronary blood vessel and wherein said method further comprises the additional step of:

d) blocking the lumen of the coronary blood vessel at a location which is upstream of said transmyocardial bloodflow passageway.

Claim 34. (withdrawn) The method of Claim 31 wherein said method further comprises the step of:

d) blocking the lumen of the coronary vein downstream of said fistulous connection.

Claim 35. (withdrawn) The method of Claim 29 .further comprising the step of:

d) placing an intraluminal valving apparatus within the lumen of the coronary blood vessel, said infcraluminal valving apparatus comprising at least one occluder member which is alternately deployable in:

i) an open position whereby bloodflow is permitted to pass from said transmyocardial bloodflow passageway and through the lumen of the coronary vein in a perfusion direction; and,

ii) a closed position whereby blood is prevented from flowing from the coronary vein into said transmyocardial bloodflow passageway, in a backflow direction.

Claim 36. (withdrawn) The method of Claim 35 wherein the intravascular valving apparatus of step C is positioned downstream of the transmyocardial bloodflow passageway, and wherein said

method further comprises the step of:

e) blocking the lumen of the coronary vein upstream of the transmyocardial bloodflow passageway.

Claim 37. (withdrawn) The method of Claim 29 further comprising the step of:

c) forming an endogenous tissue valve which is alternately moveable between:

i) an open position whereby bloodflow is permitted to pass from said transmyocardial bloodflow passageway and through the lumen of said coronary vessel, in a first direction; and,

ii) a closed position whereby said tissue valve will prevent blood from flowing from the coronary vein into said transmyocardial bloodflow passageway, in a second direction opposite said first direction.

Claim 38. (withdrawn) The method of Claim 37 wherein said tissue valve is formed at the junction of the transmyocardial bloodflow passageway and the coronary blood vessel

Claim 39. (withdrawn) The method of Claim 38 wherein the tissue valve comprises at least one segment of the coronary blood vessel in combination with at least one underlying segment of myocardial tissue.

Claim 40. (withdrawn) The method of Claim 37 wherein at .least one segment .of coronary blood vessel and at least one underlying tapered segment of myocardial tissue which form said valving tissue valve are sized and configured such that, when systcolic blood pressure is created within said transmyocardial bloodflow passageway said tissue valve will move to its open position, and thereafter when diastolic blood pressure is present in said fransmyocardial bloodflow passageway, said tissue valve will move to its closed position.

Claim 41. (withdrawn) The method of Claim 29 further comprising the step of:

connecting an elastic closure member to the myocardial tissue on either side of said transmyocardial bloodflow passageway, said elastic closure member being alternately transitionable between:

i) a stretched configuration whereby an opening is formed to permit blood to flow from said transmyocardial bloodflow passageway into said coronary vein; and

ii) a retracted configuration whereby said opening is substantially closed, thereby preventing blood from backflowing from said coronary vein into said transmyocardial bloodflow passageway.

Claim 42. (withdrawn) The method of Claim 41 wherein said elastic closure member is a suture which is formed of elastic material and passed through said myocardial tissue on opposite sides of said transmyocardial bloodflow passageway.

Claim 43. (withdrawn) The method of Claim 29 further comprising the step of:

b) placing a .protrusive stent within said transmyocardial passageway, such that said protrusive stent extends into said coronary vessel.

Claim 44. (withdrawn) The method of Claim 43 wherein said protrusive stent is uncovered.

Claim 45. (withdrawn) The method of Claim 43 wherein said protrusive stent is at least partially covered.

Claim 46. (withdrawn) The method of Claim 43 wherein said protrusive stent incorporates at least one valve to intermittently block blood flow, in at least one direction, through said

transmyocardial passageway.

Claim 47. (withdrawn) The method of Claim 46 wherein said valve is operative to permit blood to flow from said chamber of the heart through said transmyocardial passageway, and into said coronary vessel, but will prevent blood from backflowing from said coronary vein into said transmyocardial passageway.

Claim 48. (withdrawn) An intraluminal valving apparatus which is operative to prevent blood from a backflowing from a coronary blood vessel into a transmyocardial bloodflow passageway which extends from a chamber of the heart to said coronary blood vessel, said apparatus comprising:

a generally cylindrical body having an axial bore which extends longitudinally therethrough; and

at least one occluder member positioned within said axial bore, said at least one occluder member being alternately moveable between:

i) an open position whereby systolic blood is permitted to pass from said transmyocardial bloodflow passageway, through the lumen of the coronary blood vessel; and,

ii) a closed position whereby blood is prevented from backflowing from the lumen of the coronary blood vessel into the transmyocardial bloodflow passageway

Claim 49. (withdrawn) The valving apparatus of Claim 48 wherein said generally cylindrical body is initially of a radially compact diameter so as to be transluminally advanceable through the vasculature into said blood vessel, and is subsequently expandable to a second radially expanded diameter wherein said cylindrical body will contact and engage the surrounding wall of said blood vessel.

Claim 50. (withdrawn) The valving apparatus of Claim 49 wherein said cylindrical body is self-expanding.

Claim 51. (withdrawn) The valving apparatus of Claim 49 wherein said cylindrical body is pressure-expandable.

Claim 52. (withdrawn) The' valving apparatus of Claim 48 further comprising:

a side aperture formed in the cylindrical body of said apparatus, said side aperture being alienable with said transmyocardial bloodflow passageway such that blood from said transmyocardial bloodflow passageway may flow through said side aperture and into the axial bore of the valving apparatus.

Claim 53. (withdrawn) The valving apparatus of Claim 52 wherein said at least one occluder member is configured to close off said side aperture when in it's closed position, and further such that subsequent increase in blood pressure within the transmyocardial bloodflow passageway will move said occluder member to said open position, thereby reopening said side aperture.

Claim 54. (withdrawn) The valving apparatus of Claim 53 wherein said at least one occluder member is positioned within the axial bore of the apparatus, at a location downstream of said side aperture, such that systolic bloodflow which passes from the transmyocardial bloodflow passageway into the axial bore of the apparatus will force said occluder member to its open position, thereby causing the bloodflow' to continue in the downstream direction, and the subsequent creation of diasfcolic blood pressure is within the transmyocardial bloodflow passageway will 'move said occluder member to its closed position thereby preventing blood from backflowing out of said side aperture and into said transmyocardial bloodflow passageway.

Claim 55. (withdrawn) The valving apparatus of Claim 53 further comprising:

a blocking member which closes off the axial bore of the apparatus, upstream of said side aperture.

Claim 56. (withdrawn) The valving apparatus of Claim 48 further comprising:

a secondary occluder member which closes off the axial bore of -the apparatus, upstream of said side aperture

Claim 57. (withdrawn) The valving apparatus of Claim 48 wherein the apparatus is intended to be positioned within said coronary blood vessel at a location downstream of said junction between said blood vessel and said transmyocardial bloodflow passageway, and wherein:

said at least one occluder member which is configured to permit blood to flow in a perfusion direction through said axial bore, when said at least one occluder member is in it's open position, and to prevent blood from backflowing through said axial bore in a backflow direction, when said occluder member is in its closed position.

Claim 58. (withdrawn) A system comprising two of the valving apparatus of Claim 48, one of said valving apparatus being positionable within said coronary blood vessel upstream of said transmyocardial bloodflow passageway, and the other of said valving apparatus being positionable within said coronary blood vessel downstream of said transmyocardial bloodflow passageway.

Claim 59. (withdrawn) An intracardiac valving apparatus which is operative to control bloodflow through a transmyocardial bloodflow passageway extending from a chamber of the heart to a coronary blood vessel, said intracardiac valving apparatus comprising:

a valve body having an opening formed therethrough, said valve body being positionable in contact with the wall of the heart such that the opening of said valve body is in alignment with said transmyocardial bloodflow passageway;

at least on occluder member positioned within the opening of said valve body, said occluder member being alternately moveable between:

i) an open position whereby blood is ermitted to pass through said fcransmyocardial bloodflow passageway in a first direction; and,

ii) a closed position whereby blood is prevented from flowing through said transmyocardial passageway in at least a second direction opposite said first direction.

Claim 60. (withdrawn) The intracardiac valving apparatus of Claim 59 wherein said apparatus further comprises:

means for holding said intracardiac valving apparatus in substantial fixed position against said wall of the chamber of the heart.

Claim 61. (withdrawn) The intracardiac valving apparatus of Claim 60 wherein said means for holding comprises hooks.

Claim 62. (withdrawn) The intracardiac valving apparatus of Claim 61 wherein said means for holding comprises sutures.

Claim 63. (withdrawn) The intracardiac valving apparatus of Claim 61 wherein said means for holding comprises an adhesive.

Claim 64. (withdrawn) The intracardiac valving apparatus of Claim 61 wherein said means for holding comprises a retainer assembly which engages the heart, and which exerts force upon said intracardiac valving apparatus to hold said intracardiac valving apparatus to hold said intracardiac valving apparatus in substantially fixed position.

Claim 65. (currently amended) A protrusive stent apparatus for stenting a transmyocardial passageway which extends from a chamber of the heart to a coronary blood vessel, said apparatus comprising:

a tubular body which has a length greater than the length of the transmyocardial passageway alternately configureable in:

i) a radially collapsed configuration of a first diameter; and

ii) a radially expanded configuration of a second diameter, said second diameter being at least as large as the diameter of the transmyocardial passageway; and

a covering formed on at least a part of said tubular body to direct blood flow from the chamber of the heart, through the tubular body and into the coronary blood vessel in a desired direction;

said protrusive stent apparatus having a length which is longer than the length of the transmyocardial passageway and a configuration that permits said apparatus to be positioned such that a portion of said apparatus resides within the transmyocardial passageway to stent said transmyocardial passageway and a portion of said apparatus extends out of the transmyocardial passageway and into said coronary blood vessel in the desired direction with a curve being formed therebetween.

66. (original) The protrusive stent apparatus of Claim 65 wherein the tubular body of said stent apparatus is self-expanding.

67. (original) The protrusive stent apparatus of Claim 65 wherein the tubular body of said stent apparatus is pressure expandable.

68. (original) The protrusive stent apparatus of Claim 66 wherein the tubular body of said stent apparatus is formed of material selected from the group of materials consisting of:

metal;

polymeric material.

69. (currently amended) The apparatus of Claim 65 wherein said covering is formed on the portion of the stent that resides within the coronary blood vessel and is configured to block flow of blood through said coronary blood vessel other than in the desired direction.

70. (original) The apparatus of Claim 69 wherein said tubular covering is formed of a material selected from the group of materials consisting of:

polyeser;

woven polyester;

polytetrafluroethylene;

expanded polytetraflouroethylene;

polyurethane;

silicone;

polycarbonate;

autologous tissue; and,

xenograft tissue.

Claim 71 - 82 (canceled)